# Welcome to DialogLink - Version 5 Revolutionize the Way You Work!

# New on Dialog

### Order Patent and Trademark File Histories Through Dialog

Thomson File Histories are now available directly through Dialog. Combined with the comprehensive patent and trademark information on Dialog, file histories give you the most complete view of a patent or trademark and its history in one place. When searching in the following patent and trademark databases, a link to an online order form is displayed in your search results, saving you time in obtaining the file histories you need.

Thomson File Histories are available from the following Dialog databases:

- CLAIMS/Current Patent Legal Status (File 123)
- CLAIMS/U.S. Patents (File 340)
- Chinese Patent Abstracts in English (File 344)
- Derwent Patents Citation Index (File 342)
- Derwent World Patents Index (for users in Japan) (File 352)
- Derwent World Patents Index First View (File 331)
- Derwent World Patents Index (File 351)
- Derwent World Patents Index (File 350)
- Ei EnCompassPat (File 353)
- European Patents Fulltext (File 348)
- French Patents (File 371)
- German Patents Fulltext (File 324)
- IMS Patent Focus (File 447, 947)
- INPADOC/Family and Legal Status (File 345)
- JAPIO Patent Abstracts of Japan (File 347)
- LitAlert (File 670)
- U.S. Patents Fulltext (1971-1975) (File 652)
- U.S. Patents Fulltext (1976-present) (File 654)
- WIPO/PCT Patents Fulltext (File 349)
- TRADEMARKSCAN U.S. Federal (File 226)

#### DialogLink 5 Release Notes

New features available in the latest release of DialogLink 5 (August 2006)

- Ability to resize images for easier incorporation into DialogLink Reports
- New settings allow users to be prompted to save Dialog search sessions in the format of their choice (Microsoft Word, RTF, PDF, HTML, or TEXT)
- Ability to set up Dialog Alerts by Chemical Structures and the addition of Index Chemicus as a structure searchable database
- Support for connections to STN Germany and STN Japan services

#### Show Preferences for details

? Help Log On Msg

\*\*\* ANNOUNCEMENTS \*\*\*

\* \* \*

\*\*\* FREE FILE OF THE MONTH (April) Promt and Trade & Industry

Database (Files 16 and 148)

Each month Dialog offers an opportunity to try out new or

unfamiliar sources by offering \$100 of free searching (either

DialUnits or connect time) in one specific file.

Output and

Alerts charges are not included. For more details visit:

http://www.dialog.com/freefile/ and then take a moment to get

familiar with another great Dialog resource.

\*\*\* "Thomson File Histories" are now available directly through Dialog

in selected patent and trademark files. Combined with the

comprehensive patent and trademark information on Dialog, file

histories give you the most complete view of a patent or trademark

and its history in one place. When searching in one of the patent

and trademark databases, a link to an online order form is displayed

in your search results, saving you time in obtaining the file

histories you need. See HELP FILEHIST for more information about

how to use the link and a list of files that contain the link.

#### NEW FILE

\*\*\*File 651, TRADEMARKSCAN(R) - China. See HELP NEWS 651 for details.

RESUMED UPDATING

\*\*\*File 523, D&B European Financial Records

#### RELOADS COMPLETED

- \*\*\*Files 154&155, MEDLINE(R)
- \*\*\*File 126, TRADEMARKSCAN(R) United Kingdom
- \*\*\*File 228, TRADEMARKSCAN(R) Spain
- \*\*\*File 672, TRADEMARKSCAN(R) Germany
- \*\*\*File 655, TRADEMARKSCAN(R) Korea
- \*\*\*File 656, TRADEMARKSCAN(R) Australia
- \*\*\*File 657, TRADEMARKSCAN(R) France
- \*\*\*File 673, TRADEMARKSCAN(R) Italy

#### \* \* \*

#### FILES RENAMED

\*\*\*File 321, PLASPEC now known as Plastic Properties Database

#### \* \* \*

#### FILES REMOVED

- \*\*\*File 301, CHEMNAME please use File 398 ChemSearch
- \*\*\*File 388, PEDS: Defense Program Summaries \*\*\*File 588, DMS-FI Contract Awards
- >>>For the latest news about Dialog products,
  services, content<<<</pre>

```
>>>http://www.dialog.com/whatsnew/. You can find
news about
 >>>a specific database by entering HELP NEWS <file
number>.
              <<<
? Help Off Line
Connecting to sahmed - Dialog - 291839
Connected to Dialog via SMS004043333
9, 15, 16, 20, 47, 75, 80, 88, 98, 112, 141, 148, 160, 275, 264, 331
, 340, 350, 351,
352,369,370,484,553,570,608,620,613,621,623,624,634,6
35,636,647,696,674, 324, 344, 348, 349,
371,810,813,587
>>>W:
                     352 is unauthorized
1 of the specified files is not available
[File 9] Business & Industry(R) Jul/1994-2009/Apr 15
(c) 2009 Gale/Cengage. All rights reserved.
[File 15] ABI/Inform(R) 1971-2009/Apr 17
(c) 2009 ProQuest Info&Learning. All rights reserved.
[File 16] Gale Group PROMT(R) 1990-2009/Mar 26
(c) 2009 Gale/Cengage. All rights reserved.
*File 16: UD/banner does not reflect last processed date
[File 20] Dialog Global Reporter 1997-2009/Apr 17
(c) 2009 Dialog. All rights reserved.
[File 47] Gale Group Magazine DB(TM) 1959-2009/Apr 08
(c) 2009 Gale/Cengage. All rights reserved.
[File 75] TGG Management Contents(R) 86-2009/Mar W2
(c) 2009 Gale/Cengage. All rights reserved.
[File 80] TGG Aerospace/Def.Mkts(R) 1982-2009/Mar 24
(c) 2009 Gale/Cengage. All rights reserved.
[File 88] Gale Group Business A.R.T.S. 1976-2009/Apr 16
```

[File 98] **General Sci Abs** 1984-2009/Apr

(c) 2009 Gale/Cengage. All rights reserved.

(c) 2009 The HW Wilson Co. All rights reserved.

[File 112] **UBM Industry News** 1998-2004/Jan 27

(c) 2004 United Business Media. All rights reserved.

\*File 112: This file is closed. For more recent UBM/CMP records, please search DIALOG Newsroom files.

# [File 141] **READERS GUIDE** 1983-2009/MAR

(c) 2009 THE HW WILSON CO. All rights reserved.

#### [File 148] Gale Group Trade & Industry DB 1976-2009/Apr 02

(c) 2009 Gale/Cengage. All rights reserved.

\*File 148: The CURRENT feature is not working in File 148. See HELP NEWS148.

# [File 160] Gale Group PROMT(R) 1972-1989

(c) 1999 The Gale Group. All rights reserved.

# [File 275] **Gale Group Computer DB(TM)** 1983-2009/Mar 23

(c) 2009 Gale/Cengage. All rights reserved.

## [File 264] **DIALOG Defense Newsletters** 1989-2009/Apr 17

(c) 2009 Dialog. All rights reserved.

# [File 331] Derwent WPI First View/UD=200919

(c) 2009 Thomson Reuters. All rights reserved.

\*File 331: Due to update delays, First View updates 200910-200913 will be skipped to align update codes with WPI. There will be no data loss.

# [File 340] CLAIMS(R)/US Patent 1950-09/Apr 14

(c) 2009 IFI/CLAIMS(R). All rights reserved.

# [File 350] **Derwent WPIX** 1963-2009/UD=200920

(c) 2009 Thomson Reuters. All rights reserved.

# [File 351] **Derwent WPI** 1963-2009/UD=200920

(c) 2009 Thomson Reuters. All rights reserved.

#### [File 369] **New Scientist** 1994-2009/Mar W5

(c) 2009 Reed Business Information Ltd. All rights reserved.

#### [File 370] **Science** 1996-1999/Jul W3

(c) 1999 AAAS. All rights reserved.

\*File 370: This file is closed (no updates). Use File 47 for more current information.

#### [File 484] **Periodical Abs Plustext** 1986-2009/Apr W2

(c) 2009 ProQuest. All rights reserved.

\*File 484: Despite the gap in UDs all content is present.

#### [File 553] **Wilson Bus. Abs.** 1982-2009/Apr

(c) 2009 The HW Wilson Co. All rights reserved.

#### [File 570] Gale Group MARS(R) 1984-2009/Mar 27

(c) 2009 Gale/Cengage. All rights reserved.

#### [File 608] **MCT Information Svc.** 1992-2009/Apr 17

(c) 2009 MCT Information Svc. All rights reserved.

#### [File 620] **EIU:Viewswire** 2009/Apr 16

(c) 2009 Economist Intelligence Unit. All rights reserved.

### [File 613] **PR Newswire** 1999-2009/Apr 17

(c) 2009 PR Newswire Association Inc. All rights reserved.

\*File 613: File 613 now contains data from 5/99 forward. Archive data (1987-4/99) is available in File 813.

#### [File 621] Gale Group New Prod.Annou.(R) 1985-2009/Mar 13

(c) 2009 Gale/Cengage. All rights reserved.

#### [File 623] **Business Week** 1985-2009/Apr 15

(c) 2009 The McGraw-Hill Companies Inc. All rights reserved.

# [File 624] McGraw-Hill Publications 1985-2009/Apr 17

(c) 2009 McGraw-Hill Co. Inc. All rights reserved.

# [File 634] San Jose Mercury Jun 1985-2009/Apr 16

(c) 2009 San Jose Mercury News. All rights reserved.

# [File 635] **Business Dateline(R)** 1985-2009/Apr 17

(c) 2009 ProQuest Info&Learning. All rights reserved.

# [File 636] Gale Group Newsletter DB(TM) 1987-2009/Mar 27

(c) 2009 Gale/Cengage. All rights reserved.

#### [File 647] **UBM Computer Fulltext** 1988-2009/Feb W3

(c) 2009 UBM, LLC. All rights reserved.

# [File 696] **DIALOG Telecom. Newsletters** 1995-2009/Apr 08

(c) 2009 Dialog. All rights reserved.

# [File 674] Computer News Fulltext 1989-2006/Sep W1

(c) 2006 IDG Communications. All rights reserved.

\*File 674: File 674 is closed (no longer updates).

#### [File 324] GERMAN PATENTS FULLTEXT 1967-200916

(c) 2009 UNIVENTIO/THOMSON. All rights reserved.

### [File 344] Chinese Patents Abs Jan 1985-2006/Jan

(c) 2006 European Patent Office. All rights reserved.

# [File 348] **EUROPEAN PATENTS** 1978-200915

(c) 2009 European Patent Office. All rights reserved.

# [File 349] **PCT FULLTEXT** 1979-2009/UB=20090402|UT=20090326

(c) 2009 WIPO/Thomson. All rights reserved.

# [File 371] French Patents 1961-2002/BOPI 200209

(c) 2002 INPI. All rts. reserv. All rights reserved.

#### [File 810] **Business Wire** 1986-1999/Feb 28

(c) 1999 Business Wire . All rights reserved.

#### [File 813] **PR Newswire** 1987-1999/Apr 30

(c) 1999 PR Newswire Association Inc. All rights reserved.

# [File 587] Jane's Defense&Aerospace 2009/Mar W3

(c) 2009 Jane's Information Group. All rights reserved.

```
s au=(GULATI MANU or GULATI, MANU or GULATI M? or
GULATI, M?)
>>>W: One or more prefixes are unsupported
  or undefined in one or more files.
               AU=GULATI MANU
           80
           46
               AU=GULATI, MANU
          108 AU=GULATI M?
           95
               AU=GULATI, M?
S1
          149
               S AU=(GULATI MANU OR GULATI, MANU OR
GULATI M? OR GULATI, M?)
  s au=(MOLL LAURENT or MOLL, LAURENT or MOLL L?
or MOLL, L?)
>>>W: One or more prefixes are unsupported
 or undefined in one or more files.
           48
               AU=MOLL LAURENT
           32
               AU=MOLL, LAURENT
          203 AU=MOLL L?
          141 AU=MOLL, L?
S2
               AU=(MOLL LAURENT OR MOLL, LAURENT
          234
OR MOLL L? OR MOLL, L?)
? s s1 and s2 and SPI
          149
               S1
          234
               S2
        72290
               SPT
           15 S S1 AND S2 AND SPI
S3
  S S3 not py>2003
Processing
Processing
Processing
Processing
Processing
Processing
Processing
           15
```

S3

84342997 PY>2003

0 S S3 NOT PY>2003 S 4

? TYPE S3/3, K/ALL

3/3,K/1 (Item 1 from file: 340) Links

Fulltext available through: Order File History

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

10643974

E/APPARATUS AND METHOD TO RECEIVE AND ALIGN INCOMING DATA IN A BUFFER TO EXPAND DATA WIDTH BY UTILIZING A SINGLE WRITE PORT **MEMORY** 

DEVICE

Inventors:Gulati Manu (US); Moll Laurent R (US)

Assignee: Unassigned Or Assigned To Individual

Assignee Code: 68000

Probable Assignee (A1): Broadcom Corp

Attorney, Agent or Firm: GARLICK HARRISON & MARKISON LLP, P.O.

BOX

160727, AUSTIN, TX, 78716-0727, US

Publication Application

Number Kind Date Number

Date

\_\_\_\_

US 20040151203 A1 20040805 US 2003685231

20031014

Cont.-in-part of: Pending US 2003356661

20030131

Priority Applic: US 2003685231

20031014

US 2003356661

20030131

Document Type:

Inventors: Gulati Manu...

#### ...Moll Laurent R

Non-exemplary Claims:

...7. The apparatus of claim 4 wherein the received data is based on

SPI-4 protocol...

...14 wherein one input decode and routing unit decodes and

routes incoming data based on **SPI**-4 protocol...

...20. The method of claim 19 wherein the data is based on **SPI**-4 protocol...

3/3,K/2 (Item 2 from file: 340) **Links** 

Fulltext available through: Order File History

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

10512500 2004-0019704

E/MULTIPLE PROCESSOR INTEGRATED CIRCUIT HAVING CONFIGURABLE PACKET-BASED INTERFACES

Inventors:Gulati Manu (US); Keller James (US); Moll

Laurent (US); Sano Barton (US)

Assignee: Unassigned Or Assigned To Individual

Assignee Code: 68000

Attorney, Agent or Firm: GARLICK HARRISON & MARKISON LLP, P.O.

BOX

160727, AUSTIN, TX, 78716-0727, US

Publication Application

Number Kind Date Number

Date

\_\_\_\_

US 20040019704 A1 20040129 US 2003356390

20030131

Priority Applic: US 2003356390

20030131

Provisional Applic: US 60-380740

20020515

US 60-419032

20021016

Document Type:

Inventors: Gulati Manu...

#### ...Moll Laurent

Non-exemplary Claims:

 $\ldots$ at least one of a HyperTransport (HT) input/output port and a System

Packet Interface (SPI) input/output port; and the second configurable packet-based interface is configured to provide at least

one of the HyperTransport (HT) input/output port and the  $System\ Packet$ 

Interface (SPI) input/ output port...

 $\dots$ packet-based protocol further comprises at least one of HyperTransport

(HT) and System Packet Interface (SPI).

. . .

 $\ldots$ at least one of a HyperTransport (HT) input/output port and a System

Packet Interface (SPI) input/output port; and the second configurable packet-based interface is configured to provide t least

one of the HyperTransport (HT) input/output port and the  $\operatorname{System}$  Packet

Interface (SPI) input/output port...

 $\ldots$ at least one of a HyperTransport (HT) input/output port and a System

Packet Interface (SPI) input/output port; and the second packet-based interface is configured to provide at least one of the

 $\label{thm:linear_to_thm} \mbox{HyperTransport (HT) input/output port and the System Packet} \\ \mbox{Interface (}$ 

SPI) input/output port

3/3,K/3 (Item 3 from file: 340) <u>Links</u>

Fulltext available through: Order File History

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

10510609 2004-0017813

E/TRANSMITTING DATA FROM A PLURALITY OF VIRTUAL CHANNELS VIA A MULTIPLE PROCESSOR DEVICE

Inventors:Gulati Manu (US); Keller James (US); Moll
Laurent (US)

Assignee: Unassigned Or Assigned To Individual

Assignee Code: 68000

Probable Assignee (A1): Broadcom Corp

Attorney, Agent or Firm: GARLICK HARRISON & MARKISON LLP, P.O.

BOX

160727, AUSTIN, TX, 78716-0727, US

Publication Application

Number Kind Date Number

Date

----

US 20040017813 A1 20040129 US 2003356348

20030131

Priority Applic: US 2003356348

20030131

Provisional Applic: US 60-380740

20020515

US 60-419040

20021016

Document Type:

Inventors: Gulati Manu...

#### ...Moll Laurent

Abstract: ...the stored data in accordance with a 1st or 2nd transmission

protocol (e.g., HT, SPI, et cetera) to produce a packetized transmission.

Non-exemplary Claims:

...to produce buffered data; packetizing the buffered data in accordance with a System Packet Interface (SPI) protocol to produce SPI packets; and elastic storing the SPI packets

...to produce buffered data; packetize the buffered data in accordance with

- a System Packet Interface (SPI) protocol to produce SPI packets; and elastic store the SPI packets...
- ...to produce buffered data; packetize the buffered data in accordance with
  - a System Packet Interface (SPI) protocol to produce SPI packets; and elastic store the SPI packets.

3/3,K/4 (Item 4 from file: 340) **Links** 

Fulltext available through: Order File History

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

04936326

E/(A1) HYPERTRANSPORT/**SPI**-4 INTERFACE SUPPORTING CONFIGURABLE DESKEWING

(B2) HYPERTRANSPORT/**SPI**-4 INTERFACE SUPPORTING CONFIGURABLE DESKEWING

Inventors:Gulati Manu (US); Moll Laurent R (US)

Assignee: (A1) Unassigned Or Assigned To Individual

(B2) Broadcom Corp

Assignee Code: (A1) 68000; (B2) 59773 Probable Assignee (A1): Broadcom Corp

Attorney, Agent or Firm: Garlick Harrison & Markison; Garlick,

Bruce E.

; Smith, Kevin L.

Publication	Publication Application							
		Number	Kind	d Date		Number		
Date								
	US	20040130347	' A1	20040708	US	2003742060		
20031220								
00001000	US	7490187	В2	20090210	US	2003742060		
20031220								
Cont in nont of	Dos	o d			TTC	2002256200		
Contin-part of: 20030131	Per	laing			05	2003356390		
Prior Publication:	IIC	20040130345	, z <sub>1</sub> 1	20040708				
Priority Applic:	0.5	20040130347	ΔI	20040700	TIS	2003742060		
20031220					OD	2005/12000		
20031220					US	2003356390		
20030131					0.0			
Provisional Applic:					US	60-380740		
20020515								
					US	60-419032		
20021016								
Calculated Expiration	on:	20230131						
Notes: Subject to a	ny I	Disclaimer,	the	term of	thi	s patent is		
extended or								
adjusted under	35 t	JSC 154(b) b	y 94	40 days.				

...HYPERTRANSPORT/SPI-4 INTERFACE SUPPORTING CONFIGURABLE DESKEWING

. . .

...HYPERTRANSPORT/ $\mathbf{SPI}-4$  INTERFACE SUPPORTING CONFIGURABLE DESKEWING

Document Type:

Inventors:Gulati Manu...

#### ...Moll Laurent R

Non-exemplary Claims:

- ...digital interface of claim 1, wherein the at least one other interface standard includes the SPI-4 Standard...
- $\dots$ The method of claim 11, wherein the at least one other interface

standard includes the SPI-4 Standard...

...digital interface of claim 1, wherein the at least one other interface

standard includes the SPI-4 Standard...

... The method of claim 11, wherein the at least one other interface

standard includes the SPI-4 Standard...

3/3,K/5 (Item 5 from file: 340) Links

Fulltext available through: Order File History

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

04735596

E/(A1) APPARATUS AND METHOD TO RECEIVE AND DECODE INCOMING DATA AND TO HANDLE REPEATED SIMULTANEOUS SMALL FRAGMENTS

(B2) APPARATUS AND METHOD TO RECEIVE AND DECODE INCOMING DATA AND TO

HANDLE REPEATED SIMULTANEOUS SMALL FRAGMENTS Inventors:Gulati Manu (US); Moll Laurent R (US)

Assignee: (A1) Unassigned Or Assigned To Individual

(B2) Broadcom Corp

Assignee Code: (A1) 68000; (B2) 59773 Probable Assignee (A1): Broadcom Corp

Attorney, Agent or Firm: Garlick Harrison & Markison

Publication Application Number Kind Date Number Date US 20040153586 A1 20040805 US 2003684998 20031014 US 7319702 B2 20080115 US 2003684998 20031014 Cont.-in-part of: Pending US 2003356661 20030131 Prior Publication: US 20040153586 A1 20040805

US 2003684998 Priority Applic:

20031014

US 2003356661

20030131

Calculated Expiration: 20230131

Notes: Subject to any Disclaimer, the term of this patent is

adjusted under 35 USC 154(b) by 996 days.

Document Type:

Inventors: Gulati Manu...

#### ...Moll Laurent R

Non-exemplary Claims:

...apparatus of claim 6, wherein the data aligner to receive data

based on the SPI-4 protocol... ...apparatus of claim 12, wherein the data aligner to receive data is based on the **SPI**-4 protocol... ...circuit of claim 17, wherein the data aligner to receive data is based on the SPI-4 protocol... ... The method of claim 19, wherein the segmenting the data stream segments data based on SPI-4 protocol... ...apparatus of claim 6, wherein the data aligner to receive data is based on the SPI-4 protocol... ...apparatus of claim 12, wherein the data aligner to receive data is based on the SPI-4 protocol...

...circuit of claim 17, wherein the data aligner to receive data is based on the SPI-4 protocol...

...The method of claim 19, wherein the segmenting the data stream segments

data based on SPI-4 protocol.

3/3,K/6 (Item 6 from file: 340) **Links** 

Fulltext available through: Order File History

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

04722750

E/(A1) TRANSPARENT DATA FORMAT WITHIN HOST DEVICE SUPPORTING DIFFERING TRANSACTION TYPES

(B2) TRANSPARENT DATA FORMAT WITHIN HOST DEVICE SUPPORTING DIFFERING

TRANSACTION TYPES

Inventors:Gulati Manu (US); Moll Laurent R (US);

Rowlands Joseph B (US)

Assignee: (A1) Unassigned Or Assigned To Individual

adjusted under 35 USC 154(b) by 996 days.

(B2) Broadcom Corp

Assignee Code: (A1) 68000; (B2) 59773 Probable Assignee (A1): Broadcom Corp

Attorney, Agent or Firm: Garlick Harrison & Markison; Garlick,

Bruce E.

Publication Application Number Kind Date Number Date US 20040151175 A1 20040805 US 2003684989 20031014 US 7313146 B2 20071225 US 2003684989 20031014 Cont.-in-part of: Pending US 2003356661 20030131 Prior Publication: US 20040151175 A1 20040805 Priority Applic: US 2003684989 20031014 US 2003356661 20030131 Calculated Expiration: 20230131 Notes: Subject to any Disclaimer, the term of this patent is extended or

Document Type:

Inventors: Gulati Manu...

#### ...Moll Laurent R

Non-exemplary Claims:

...4. The system of claim 3, wherein: the packet based interface

is a

- SPI-4 interface; and the address based interface is one of a HyperTransport interface, a PCI...
- $\dots$ 21. The method of claim 20, wherein: the packet-based interface is a
- SPI-4 interface; and the input/output-based interface is one of a

HyperTransport interface, a...

- $\dots$ 4. The system of claim 3, wherein: the packet based interface is a
  - SPI-4 interface; and the address based interface is one of a HyperTransport interface, a PCI...
- $\dots$ 21. The method of claim 20, wherein: the packet-based interface is a
- SPI-4 interface; and the input/output-based interface is one of a

HyperTransport interface, a...

3/3,K/7 (Item 7 from file: 340) **Links** 

Fulltext available through: Order File History

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

04292563

E/(A1) SYSTEM HAVING INTERFACES AND SWITCH THAT SEPARATES COHERENT AND PACKET TRAFFIC

(B2) SYSTEM HAVING INTERFACES AND SWITCH THAT SEPARATES COHERENT AND

PACKET TRAFFIC

Inventors:Gulati Manu (US); Keller James B (US); Moll

Laurent R (US); Oner Koray (US); Rowlands Joseph B (US); Sano
Barton J (US)

Assignee: (A1) Unassigned Or Assigned To Individual

(B2) Broadcom Corp

Assignee Code: (A1) 68000; (B2) 59773

Attorney, Agent or Firm: Garlick Harrison & Markison

Publication		Applica				
Date		Number	Kind	d Date		Number
20040604	US	20040221072	A1	20041104	US	2004861624
20040604	US	6941406	В2	20050906	US	2004861624
20040604						
Continuation of:	US	6748479			US	2002270029
20021011 Prior Publication:	US	20040221072	A1	20041104		
Priority Applic: 20040604					US	2004861624
					US	2002270029
20021011 Provisional Applic:					US	60-331789
20011120					TTC	CO 244712
20011224					US	60-344713
20020114					US	60-348717
					US	60-348777
20020114					US	60-380740
20020515		20221011				
Calculated Expiration Notes: Subject to an			the	term of	thi	s patent is
extended or adjusted under 3	35 T	ISC 154(b) b	v 2	davs Tl	hiq	Patent is
subject to a		)	<i>y</i>	aays 11	.11.0	

Terminal Disclaimer.

```
Document Type:
Inventors: Gulati Manu...
...Moll Laurent R
Non-exemplary Claims:
... The apparatus of claim 1 wherein the interface is compatible
  system packet interface (SPI).
...apparatus of claim 1 wherein the interface is compatible as a
system
  packet interface-4 (SPI-4...
...HT) interface and at least one interface circuit is compatible
as a
  system packet interface (SPI).
...HT) interface and at least one interface circuit is compatible
  system packet interface (SPI).
...HT) interface and at least one interface circuit is compatible
as a
   system packet interface (SPI).
```

3/3,K/8 (Item 1 from file: 350) **Links** 

Fulltext available through: Order File History

Derwent WPIX

(c) 2009 Thomson Reuters. All rights reserved.

0014363146 Drawing available

WPI Acc no: 2004-551820/200453

Related WPI Acc No: 2003-443150; 2003-443151; 2003-459993; 2003-471483; 2003-902176; 2004-070464; 2004-168050; 2004-179407; 2004-179709; 2004-190759; 2004-202696; 2004-225234; 2004-246804; 2004-247141; 2004-340077; 2004-347568; 2004-603213; 2004-614150; 2004-624116; 2004-624314; 2005-010789; 2005-010807; 2005-712402; 2005-785089; 2006-796373; 2007-717114; 2003-459995; 2003-485085; 2003-485086; 2003-485087; 2003-660330; 2003-661006; 2003-846837; 2003-846838; 2003-856022; 2003-880127; 2003-880128; 2003-880129; 2004-033251; 2004-033256; 2007-205863

XRPX Acc No: N2004-436504

Hypertransport interface for data communication, has enablement control module that disables and enables deskew blocks and deskew module when they support hyper transport standard and other interface standard, respectively

Patent Assignee: GULATI M (GULA-I); MOLL L R (MOLL-I); BROADCOM CORP

(BROA-N)

Inventor: GULATI M; MOLL L R

Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Туре
US 20040130347	A1	20040708	US 2002380740	P	20020515	200453	В
			US 2002419032	P	20021016		
			US 2003356390	A	20030131		
			US 2003742060	A	20031220		
US 7490187	B2	20090210	US 2002380740	P	20020515	200917	Е
			US 2002419032	P	20021016		
			US 2003356390	Α	20030131		
			US 2003742060	Α	20031220		

Priority Applications (no., kind, date): US 2002380740 P 20020515; US 2002380740 P 20020515; US 2002419032 P 20021016; US 2002419032 P 20021016; US 2003356390 A 20030131; US 2003742060 A 20031220

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes		
US 20040130347	A1	EN	28	15	Related to Provisional	US 2002380740	
					Related to Provisional	US 2002419032	
					C-I-P of application	US 2003356390	
US 7490187	B2	EN			Related to Provisional	US 2002380740	
					Related to Provisional	US 2002419032	
					C-I-P of application	US 2003356390	

Original Titles:Hypertransport/SPI-4 interface supporting configurable deskewing...
...Hypertransport/SPI-4 interface supporting configurable deskewing Inventor: GULATI
M... ...MOLL L R Original Publication Data by AuthorityArgentinaPublication No.
Inventor name & address:Moll, Laurent R... ...Gulati, Manu... ...Gulati, Manu... ...Moll,
Laurent R

3/3,K/9 (Item 2 from file: 350) **Links** 

Fulltext available through: Order File History

**Derwent WPIX** 

(c) 2009 Thomson Reuters. All rights reserved.

0013987003 Drawing available

WPI Acc no: 2004-168050/200416

Related WPI Acc No: 2003-443150; 2003-443151; 2003-459993; 2003-471483; 2003-880128; 2003-902176; 2004-033256; 2004-070464; 2004-179407; 2004-179709; 2004-190759; 2004-202696; 2004-225234; 2004-246804; 2004-247141; 2004-340077; 2004-347568; 2004-551820; 2004-603213; 2004-614150; 2004-624116; 2004-624314; 2004-718057; 2004-736067; 2005-010789; 2005-010807; 2005-712402; 2005-785089; 2006-

796373; 2007-717114

XRPX Acc No: N2004-134026

Virtual channel data transmitting method for data communications, involves packetizing stored data based on transmission protocols when respective protocol is indicated during cycle different from other two cycles

Patent Assignee: GULATI M (GULA-I); KELLER J (KELL-I); MOLL L (MOLL-I)

Inventor: GULATI M; KELLER J; MOLL L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	II ISTE	Application Number	Kind	Date	Update	Туре
US 20040017813	A1	20040129	US 2002380740	P	20020515	200416	В
			US 2002419040	P	20021016		
			US 2003356348	A	20030131		

Priority Applications (no., kind, date): US 2002380740 P 20020515; US 2002419040 P 20021016; US 2003356348 A 20030131

#### Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes				
US 20040017813	A1	EN	20	9	Related to Provisional	US 2002380740			
					Related to Provisional	US 2002419040			

Inventor: **GULATI M...** ...**MOLL L** Original Publication Data by AuthorityArgentina**Publication No.** Inventor name & address:**Gulati, Manu...** ...**Moll, Laurent** ...**Original Abstracts:**the stored data in accordance with a 1st or 2nd transmission protocol (e.g., HT, **SPI**, et cetera) to produce a packetized transmission.

3/3,K/10 (Item 1 from file: 351) **Links** 

Fulltext available through: Order File History

Derwent WPI

(c) 2009 Thomson Reuters. All rights reserved.

0014363146 Drawing available

WPI Acc no: 2004-551820/200453

Related WPI Acc No: 2003-443150; 2003-443151; 2003-459993; 2003-471483; 2003-902176; 2004-070464; 2004-168050; 2004-179407; 2004-179709; 2004-190759; 2004-202696; 2004-225234; 2004-246804; 2004-247141; 2004-340077; 2004-347568; 2004-603213; 2004-614150; 2004-624116; 2004-624314; 2005-010789; 2005-010807; 2005-712402; 2005-785089; 2006-796373; 2007-717114; 2003-459995; 2003-485085; 2003-485086; 2003-485087; 2003-660330; 2003-661006; 2003-846837; 2003-846838; 2003-856022; 2003-880127; 2003-880128; 2003-880129; 2004-033251; 2004-033256; 2007-205863

XRPX Acc No: N2004-436504

Hypertransport interface for data communication, has enablement control module that disables and enables deskew blocks and deskew module when they support hyper transport standard and other interface standard, respectively

Patent Assignee: GULATI M (GULA-I); MOLL L R (MOLL-I); BROADCOM CORP

(BROA-N)

Inventor: GULATI M; MOLL L R

Patent Family (2 patents, 1 countries)

Patent Number	Kind		Application Number	Kind	Date	Update	Туре
US 20040130347	A1	20040708	US 2002380740	P	20020515	200453	В
			US 2002419032	P	20021016		
			US 2003356390	A	20030131		
			US 2003742060	A	20031220		
US 7490187	B2	20090210	US 2002380740	P	20020515	200917	Е
			US 2002419032	P	20021016		
			US 2003356390	A	20030131		
			US 2003742060	A	20031220		

Priority Applications (no., kind, date): US 2002380740 P 20020515; US 2002380740 P 20020515; US 2002419032 P 20021016; US 2002419032 P 20021016; US 2003356390 A 20030131; US 2003742060 A 20031220

#### Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes					
US 20040130347	A1	EN	28	15	Related to Provisional	US 2002380740				
					Related to Provisional	US 2002419032				
					C-I-P of application	US 2003356390				
US 7490187	B2	EN			Related to Provisional	US 2002380740				
					Related to Provisional	US 2002419032				
					C-I-P of application	US 2003356390				

Original Titles:Hypertransport/SPI-4 interface supporting configurable deskewing...
...Hypertransport/SPI-4 interface supporting configurable deskewing Inventor: GULATI
M... ...MOLL L R Original Publication Data by AuthorityArgentinaPublication No.
Inventor name & address:Moll, Laurent R... ...Gulati, Manu... ...Gulati, Manu... ...Moll,
Laurent R

3/3,K/11 (Item 2 from file: 351) **Links** 

Fulltext available through: Order File History

Derwent WPI

(c) 2009 Thomson Reuters. All rights reserved.

0013987003 Drawing available

WPI Acc no: 2004-168050/200416

Related WPI Acc No: 2003-443150; 2003-443151; 2003-459993; 2003-471483; 2003-880128; 2003-902176; 2004-033256; 2004-070464; 2004-179407; 2004-179709; 2004-190759; 2004-202696; 2004-225234; 2004-246804; 2004-247141; 2004-340077; 2004-347568; 2004-551820; 2004-603213; 2004-614150; 2004-624116; 2004-624314; 2004-718057; 2004-736067; 2005-010789; 2005-010807; 2005-712402; 2005-785089; 2006-

796373; 2007-717114

XRPX Acc No: N2004-134026

Virtual channel data transmitting method for data communications, involves packetizing stored data based on transmission protocols when respective protocol is indicated during cycle different from other two cycles

Patent Assignee: GULATI M (GULA-I); KELLER J (KELL-I); MOLL L (MOLL-I)

Inventor: GULATI M; KELLER J; MOLL L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	II ISTE	Application Number	Kind	Date	Update	Туре
US 20040017813	A1	20040129	US 2002380740	P	20020515	200416	В
			US 2002419040	P	20021016		
			US 2003356348	A	20030131		

Priority Applications (no., kind, date): US 2002380740 P 20020515; US 2002419040 P 20021016; US 2003356348 A 20030131

#### Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes				
US 20040017813	A1	EN	20	9	Related to Provisional	US 2002380740			
					Related to Provisional	US 2002419040			

Inventor: **GULATI M...** ...**MOLL L** Original Publication Data by AuthorityArgentina**Publication No.** Inventor name & address:**Gulati, Manu...** ...**Moll, Laurent** ...**Original Abstracts:**the stored data in accordance with a 1st or 2nd transmission protocol (e.g., HT, **SPI**, et cetera) to produce a packetized transmission.

3/3K/12 (Item 1 from file: 348) **Links** 

Fulltext available through: Order File History

EUROPEAN PATENTS

(c) 2009 European Patent Office. All rights reserved.

01581453

# System having two or more packet interfaces, a switch, a shared packet DMA (Direct Memory Access) circuit and a L2 (Level 2) cache

System, welches zwei oder mehr Paketschnittstellen, einen Schalter, einen gemeinsamen Paket-DMA (Direct Memory Access)-Schaltkreis sowie einen L2 (Level 2) Cache aufweist Systeme incluant deux ou plusieures interfaces de paquets, un commutateur, un circuit DMA (Direct Memory Access) de memoire partagee et une antememoire de second niveau

# **Patent Assignee:**

• **Broadcom Corporation**; (2064671)

16215 Alton Parkway; Irvine, California 92618; (US) (Proprietor designated states: all)

#### **Inventor:**

• Sano, Barton J.

6156 Northland Trail; Fremont, CA 94555; (US)

• Moll, Laurent R.

18253 Purdue Drive; Saratoga, CA 95070; (US)

• Oner, Koray

1211 Rosseau Drive; Sunnyvale, CA 94087; (US)

• Gulati, Manu

1575 Vista Club Circle, Apartment 302; Santa Clara, CA 95054; (US)

• ...US)

;;

• Moll, Laurent R... ...US)

; ;

• Gulati, Manu...

::

#### **Legal Representative:**

#### • Jehle, Volker Armin (95141)

Patentanwalte Bosch, Graf von Stosch, Jehle, Fluggenstrasse 13; 80639 Munchen; (DE)

	Country	Number	Kind	Date	
Patent	EP	1313273	A1	20030521	(Basic)
	EP	1313273	B1	20051109	
Application	EP	2002025690		20021120	
Priorities	US	380740	P	20020515	
	US	331789	P	20011120	
	US	344713	P	20011224	

US	348777	P	20020114	
US	348717	P	20020114	
US	269666		20021011	

#### **Designated States:**

AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL;

PT; SE; SK; TR;

# **Extended Designated States:**

AL; LT; LV; MK; RO; SI;

Application: English

International Patent Class (V7): H04L-012/56Abstract Word Count: 137

NOTE: 1

**NOTE:** Figure number on first page: 1

Туре	Pub. Date	Kind	Text
Publication: Engl	lish		
Procedural: Engl	lish		

Available Text	Language	Update	Word Count		
CLAIMS A	(English)	200321	944		
SPEC A	(English)	200321	10940		
CLAIMS B	(English)	200545	1078		
CLAIMS B	(German)	200545	989		
CLAIMS B	(French)	200545	1347		
SPEC B	(English)	200545	10934		
Total Word Count (Document A) 11885					
Total Word Count (Document B) 14348					
Total Word Count (All Docun	nents) 26233				

**Specification:** ...carry packet data. For example, in some embodiments, the interfaces may be system packet interfaces (SPI) according to any level of the SPI specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be SPI-4 phase 2 interfaces. In other embodiments, the interfaces may be HyperTransport(TM) (HT) interfaces ... ...illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the SPI-4 interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and SPI -4 interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e...defined by the interface from which the Rx circuit receives packet data. For example, the **SPI**-4 interface and the HT interface may both support 16 virtual channels in hardware (although more may be used by software in the **SPI-**4 interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit... ...embodiment of Fig. 3, the Rx circuit 26A includes a decoder 50 (which includes a SPI decoder 52 and an HT decoder 54 including a PoHT BAR1 register 56), the H... ...receives the input data from the interface 30A and decodes the data according to the SPI specification (in the **SPI** decoder 52) or the HT specification (in the HT decoder 54). One of the decoders ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving SPI-4 phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit

may indicate, when set, that a **SPI**-4 abort control word was received in the packet or an error was detected in... ...field stores the IVC for a received packet, if the packet was transmitted on the **SPI** interface. For output queue descriptors, the VC field may store a value for which the... ...28C may append the bits to the OVC to generate the VC field in the **SPI**-4 packet. The memory buffer address field stores the address of the memory buffer indicated... ...of the system 10. Illustrated in Fig. 12 is exemplary packet data transmitted on a **SPI**-4 interface and the packet data stored in a set of input queues of the... ...to the packet DMA circuit 16 for storage in the memory 24. Transmitters on a **SPI**-4 interface (e.g. the Tx circuits 28A-28C) are permitted to segment the packets... ...packet fragments of different packets. For example, packets traveling in different virtual channels on the **SPI**-4 interface may have fragments interleaved on the **SPI**-4 interface. Illustrated on the **SPI**-4 interface in Fig. 12 is a first packet (P0) comprising packet fragments P01)), P02...

**Specification:** ...carry packet data. For example, in some embodiments, the interfaces may be system packet interfaces (SPI) according to any level of the SPI specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be SPI-4 phase 2 interfaces. In other embodiments, the interfaces may be HyperTransport(TM) (HT) interfaces ... ...illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the SPI-4 interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and SPI -4 interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e... ... defined by the interface from which the Rx circuit receives packet data. For example, the **SPI**-4 interface and the HT interface may both support 16 virtual channels in hardware (although more may be used by software in the SPI-4 interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit...embodiment of Fig. 3, the Rx circuit 26A includes a decoder 50 (which includes a SPI decoder 52 and an HT decoder 54 including a PoHT BAR1 register 56), the H... ...receives the input data from the interface 30A and decodes the data according to the SPI specification (in the SPI decoder 52) or the HT specification (in the HT decoder 54). One of the decoders ... ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving SPI-4 phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit may indicate, when set, that a SPI-4 abort control word was received in the packet or an error was detected in... ... field stores the IVC for a received packet, if the packet was transmitted on the **SPI** interface. For output queue descriptors, the VC field may store a value for which the... ... 28C may append the bits to the OVC to generate the VC field in the SPI-4 packet. The memory buffer address field stores the address of the memory buffer indicated...of the system 10. Illustrated in Fig. 12 is exemplary packet data transmitted on a SPI-4 interface and the packet data stored in a set of input queues of the... ...to the packet DMA circuit 16 for storage in the memory 24. Transmitters on a SPI-4 interface (e.g. the Tx circuits 28A-28C) are permitted to segment the packets... ...packet fragments of different packets. For example, packets traveling in different virtual channels on the SPI-4 interface may have fragments interleaved on the SPI-4 interface. Illustrated on the SPI-4 interface in Fig. 12 is a first packet (P0) comprising packet fragments P01)), P02...

**Claims:** ...4, caracterise en ce que l'une des au moins deux interfaces est une interface **SPI** (<< System Packet Interfaces >>)

7. Le dispositif selon l'une quelconque des revendications 1 a 6...

3/3K/13 (Item 2 from file: 348) **Links** 

Fulltext available through: Order File History

**EUROPEAN PATENTS** 

(c) 2009 European Patent Office. All rights reserved.

01581452

# Systems including packet interfaces, and packet-DMA (Direct Memory Access) circuits for splitting and merging packet streams

Systeme, welche Paketschnittstellen und Paket-DMA (Direct Memory Access) Schaltkreise beinhalten, um Paketstrome zu teilen und zusammenzusetzen

Systemes incluant des interfaces de paquets et des circuits paquet-DMA (Direct Memory Access) pour separer et fusionner des flux de paquets

# Patent Assignee:

• **Broadcom Corporation**; (2064671)

16215 Alton Parkway; Irvine, California 92618; (US)

(Proprietor designated states: all)

#### **Inventor:**

• Sano, Barton

6156 Northland Trail; Fremont, CA 94555; (US)

• Moll, Laurent R.

18253 Purdue Drive; Saratoga, CA 95070; (US)

• Gulati, Manu

1575 Vista Club Circle, Apt. 302; Santa Clara, CA 95054; (US)

• ...US)

;;

• Moll, Laurent R... ... US)

: :

• Gulati, Manu...

: :

# **Legal Representative:**

#### • Jehle, Volker Armin, Dipl.-Ing. (95141)

Patentanwalte Bosch, Graf von Stosch, Jehle, Fluggenstrasse 13; 80639 Munchen; (DE)

	Country	Number	Kind	Date	
Patent	EP	1313272	A1	20030521	(Basic)
	EP	1313272	B1	20050323	
Application	EP	2002025688		20021120	
Priorities	US	331789	P	20011120	
	US	344713	P	20011224	
	US	348777	P	20020114	
	US	348717	P	20020114	
	US	380740	P	20020515	

US 270016	20021011
-----------	----------

#### **Designated States:**

AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL;

PT; SE; SK; TR;

# **Extended Designated States:**

AL; LT; LV; MK; RO; SI;

**International Patent Class (V7):** H04L-012/56Abstract Word Count: 90

NOTE: 1

**NOTE:** Figure number on first page: 1

Type	Pub. Date	Kind	Text
Dublication, Eng	liah		

Publication: English Procedural: English Application: English

Available Text	Language	Update	Word Count	
CLAIMS A	(English)	200321	1562	
SPEC A	(English)	200321	10969	
CLAIMS B	(English)	200512	1342	
CLAIMS B	(German)	200512	1319	
CLAIMS B	(French)	200512	1496	
SPEC B	(English)	200512	10298	
Total Word Count (Document A) 12533				
Total Word Count (Document B) 14455				
Total Word Count (All Documents) 26988				

**Specification:** ...carry packet data. For example, in some embodiments, the interfaces may be system packet interfaces (SPI) according to any level of the SPI specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be SPI-4 phase 2 interfaces. In other embodiments, the interfaces may be HyperTransport(TM) (HT) interfaces ... ...illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the SPI-4 interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and SPI -4 interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e... ... defined by the interface from which the Rx circuit receives packet data. For example, the SPI-4 interface and the HT interface may both support 16 virtual channels in hardware (although more may be used by software in the SPI-4 interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit... ...packet destination device (that is, a device that only sinks packets). In embodiments employing the SPI-4 interface, one SPI-4 link in the desired direction from an interface circuit 20A-20C may be used... ...circuit 26A may be used to receive packets from the packet source device via the SPI-4 interface. The Tx circuit 28A may be coupled via the SPI-4 interface to some other device, or may not be used. Similarly, if a packet... ... circuit 28A may be used to transmit packets to the packet destination device via the SPI-4 interface. The Rx circuit 26A may be coupled via the SPI-4 interface to some other device, or may not be used. Furthermore, in some embodiments, a packet source/destination device may be coupled to one **SPI**-4 link in one direction to one system 10 (e.g. from the device to the system 10) and

to another **SPI**-4 link in the other direction from another system 10 (e.g. from the system...embodiment of Fig. 5, the Rx circuit 26A includes a decoder 50 (which includes a **SPI** decoder 52 and an HT decoder 54 including a PoHT BAR1 register 56), the H... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 52) or the HT specification (in the HT decoder 54). One of the decoders ...

**Specification:** ...carry packet data. For example, in some embodiments, the interfaces may be system packet interfaces (SPI) according to any level of the SPI specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be SPI-4 phase 2 interfaces. In other embodiments, the interfaces may be HyperTransport(TM) (HT) interfaces ... ...illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the SPI-4 interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and SPI -4 interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e... ... defined by the interface from which the Rx circuit receives packet data. For example, the SPI-4 interface and the HT interface may both support 16 virtual channels in hardware (although more may be used by software in the **SPI-**4 interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit...packet destination device (that is, a device that only sinks packets). In embodiments employing the SPI-4 interface, one SPI-4 link in the desired direction from an interface circuit 20A-20C may be used... ... circuit 26A may be used to receive packets from the packet source device via the SPI-4 interface. The Tx circuit 28A may be coupled via the SPI-4 interface to some other device, or may not be used. Similarly, if a packet... ... circuit 28A may be used to transmit packets to the packet destination device via the SPI-4 interface. The Rx circuit 26A may be coupled via the SPI-4 interface to some other device, or may not be used. Furthermore, in some embodiments, a packet source/destination device may be coupled to one SPI-4 link in one direction to one system 10 (e.g. from the device to the system 10) and to another **SPI**-4 link in the other direction from another system 10 (e.g. from the system... ...embodiment of Fig. 5, the Rx circuit 26A includes a decoder 50 (which includes a SPI decoder 52 and an HT decoder 54 including a PoHT BAR1 register 56), the H... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 52) or the HT specification (in the HT decoder 54). One of the decoders

•••

3/3K/14 (Item 3 from file: 348) **Links** 

Fulltext available through: Order File History

**EUROPEAN PATENTS** 

(c) 2009 European Patent Office. All rights reserved.

01581450

# Systems using mix of packet, coherent, and noncoherent traffic to optimize transmission between systems

Systeme, welche eine Mischung aus paketartigem, koharentem und nicht-koharentem Verkehr verwenden, um die Ubertragung zwischen Systemen zu optimieren Systemes utilisant un traffic mixte de paquets, traffic coherent et non-coherent pour l'optimisation de transmission entre systemes

## Patent Assignee:

• **Broadcom Corporation**; (2064671)

16215 Alton Parkway; Irvine, California 92618; (US)

(Proprietor designated states: all)

#### **Inventor:**

• Sano, Barton, J.

6156 Northland Trail; Fremont, CA 94555; (US)

• Rowlands, Joseph, B.

620 Park View Drive #206; Santa Clara, CA 95054; (US)

• Moll, Laurent, R.

18253 Purdue Drive; Saratoga, CA 95070; (US)

• Gulati, Manu

1575 Vista Club Circle Apt. 302; Santa Clara, CA 95054; (US)

• ...US)

;;

• Moll, Laurent, R... ...US)

;;

• Gulati, Manu...

;;

# **Legal Representative:**

#### • Jehle, Volker Armin, Dipl.-Ing. (95141)

Patentanwalte Bosch, Graf von Stosch, Jehle, Fluggenstrasse 13; 80639 Munchen; (DE)

	Country	Number	Kind	Date	
Patent	EP	1313024	A1	20030521	(Basic)
	EP	1313024	B1	20041020	
Application	EP	2002025686		20021120	
Priorities	US	380740	P	20020515	
	US	331789	P	20011120	
	US	344713	P	20011224	

US	348777	P	20020114	
US	348717	P	20020114	
US	269922		20021011	

#### **Designated States:**

AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL;

PT; SE; SK; TR;

# **Extended Designated States:**

AL; LT; LV; MK; RO; SI;

**International Patent Class (V7):** G06F-013/14**Abstract Word Count:** 119

NOTE: 1

**NOTE:** Figure number on first page: 1

Type	Pub. Date	Kind	Text
Publication: Engl	ish		
Procedural: Engl	ish		
Application: Engl	ish		

Available Text	Language	Update	Word Count		
CLAIMS A	(English)	200321	1554		
SPEC A	(English)	200321	20371		
CLAIMS B	(English)	200443	1819		
CLAIMS B	(German)	200443	1743		
CLAIMS B	(French)	200443	2068		
SPEC B	(English)	200443	20305		
Total Word Count (Document A) 21928					
Total Word Count (Document B) 25935					
Total Word Count (All Documents) 47863					

**Specification:** ...interfaces using the PoHT extension. Alternative, such interfaces 30A-30C may be system packet interfaces (SPI) according to any level of the SPI specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI**-4 phase 2 interfaces. In the illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the SPI-4 interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and SPI-4 interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e... ...g. transmitting the packet data as a payload of a command, such as PoHT). The SPI-4 interface may define 16 hardware virtual channels, extendable to 256 virtual channels in software.....example, the interface 306 may be a HT interface (using the PoHT extension) or the SPI-4 interface, as desired. As used herein, a packet circuit includes any circuit which sources... ... example, the packet circuit 302 may be a media access control (MAC) circuit having a SPI-4 or HT packet interface. The packet circuit 302 may further comprise switches, routers, gateways...on the interface 308. In another embodiment, if desired, the interface 308 may be a SPI-4 interface if internode coherency is not used in the packet processing system 300.

The... ...defined by the interface from which the Rx circuit receives packet data. For example, the **SPI**-4 interface and the HT interface may both support 16 virtual channels in hardware

(although more may be used by software in the **SPI**-4 interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit... ...embodiment of Fig. 8, the Rx circuit 26A includes a decoder 60 (which includes a **SPI** decoder 62 and an HT decoder 64 including a PoHT BAR1 register 66), a hash... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 62) or the HT specification (in the HT decoder 64). One of the decoders ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving **SPI**-4 phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit may indicate, when set, that a **SPI**-4 abort control word was received in the packet or an error was detected in... ...field stores the IVC for a received packet, if the packet was transmitted on the **SPI** interface. For output queue descriptors, the VC field may store a value for which the... ...28C may append the bits to the OVC to generate the VC field in the **SPI**-4 packet. The memory buffer address field stores the address of the memory buffer indicated...

**Specification:** ...interfaces using the PoHT extension. Alternative, such interfaces 30A-30C may be system packet interfaces (SPI) according to any level of the SPI specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI**-4 phase 2 interfaces. In the illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the SPI-4 interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and SPI-4 interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e... ...g. transmitting the packet data as a payload of a command, such as PoHT). The SPI-4 interface may define 16 hardware virtual channels, extendable to 256 virtual channels in software...example, the interface 306 may be a HT interface (using the PoHT extension) or the SPI-4 interface, as desired. As used herein, a packet circuit includes any circuit which sources... ... example, the packet circuit 302 may be a media access control (MAC) circuit having a SPI-4 or HT packet interface. The packet circuit 302 may further comprise switches, routers, gateways... ... on the interface 308. In another embodiment, if desired, the interface 308 may be a SPI-4 interface if internode coherency is not used in the packet processing system 300.

The...defined by the interface from which the Rx circuit receives packet data. For example, the SPI-4 interface and the HT interface may both support 16 virtual channels in hardware (although more may be used by software in the SPI-4 interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit.....embodiment of Fig. 8, the Rx circuit 26A includes a decoder 60 (which includes a SPI decoder 62 and an HT decoder 64 including a PoHT BAR 1 register 66), a.....receives the input data from the interface 30A and decodes the data according to the SPI specification (in the SPI decoder 62) or the HT specification (in the HT decoder 64). One of the decoders ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving SPI-4 phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit may indicate, when set, that a SPI-4 abort control word was received in the packet or an error was detected in... ...field stores the IVC for a received packet, if the packet was transmitted on the SPI interface. For output queue descriptors, the VC field may store a value for which the... ...28C may append the bits to the OVC to generate the VC field in the SPI-4 packet. The memory buffer address field stores the address of the memory buffer indicated...

3/3K/15 (Item 4 from file: 348) **Links** 

Fulltext available through: Order File History

**EUROPEAN PATENTS** 

(c) 2009 European Patent Office. All rights reserved.

01581449

# System having interfaces and a switch that separates coherent and non-cohrent data packet traffic

System mit Schnittstellen und einem Schalter fur die Trennung von koharentem und nichtkoharentem Datenpaketverkehr

Systeme avec des interfaces et un commutateur pour la separation de trafic coherent et noncoherent de paquets de donnees

# Patent Assignee:

• **Broadcom Corporation**; (2064671)

16215 Alton Parkway; Irvine, California 92618; (US)

(Proprietor designated states: all)

#### **Inventor:**

• Sano, Barton J.

6156 Northland Trail; Fremont, California 94555; (US)

• Rowlands, Joseph B.

620 Park View Drive, #206; Santa Clara, California 95054; (US)

• Keller, James B.

210 Iris Way; Palo Alto, California 94303; (US)

• Moll, Laurent R.

18253 Purdue Drive; Saratoga, California 95070; (US)

• Oner, Koray

1211 Rousseau Drive; Sunnyvale, California 94087; (US)

• Gulati, Manu

1575 Vista Club Circle, Apt. 302; Santa Clara, California 95054; (US)

• ...US)

;;

• Moll, Laurent R... ...US)

;;

• Gulati, Manu...

;;

#### **Legal Representative:**

#### • Jehle, Volker Armin, Dipl.-Ing. (95141)

Patentanwalte Bosch, Graf von Stosch, Jehle, Fluggenstrasse 13; 80639 Munchen; (DE)

	Country	Number	Kind	Date	
Patent	EP	1313023	A1	20030521	(Basic)
	EP	1313023	B1	20050330	

Application	EP	2002025684		20021120
Priorities	US	380740	P	20020515
	US	331789	P	20011120
	US	344713	P	20011224
	US	348777	P	20020114
	US	348717	P	20020114
	US	270029		20021011

# **Designated States:**

AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL;

PT; SE; SK; TR;

# **Extended Designated States:**

AL; LT; LV; MK; RO; SI;

International Patent Class (V7): G06F-013/14Abstract Word Count: 148

NOTE: 1

**NOTE:** Figure number on first page: 1

Type	Pub. Date	Kind	Text
Publication: Englis			

Procedural: English Application: English

Available Text	Language	Update	Word Count				
CLAIMS A	(English)	200321	795				
SPEC A	(English)	200321	17923				
CLAIMS B	(English)	200513	907				
CLAIMS B	(German)	200513	865				
CLAIMS B	(French)	200513	994				
SPEC B	(English)	200513	17991				
Total Word Count (Document A) 18720							
Total Word Count (Document B) 20757							
Total Word Count (All Documents) 39477							

**Specification:** ...interfaces using the PoHT extension. Alternative, such interfaces 30A-30C may be system packet interfaces (**SPI**) according to any level of the **SPI** specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI**-4 phase 2 interfaces. In the illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the **SPI**-4 interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and **SPI**-4 interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e... ...g. transmitting the packet data as a payload of a command, such as PoHT). The **SPI**-4 interface may define 16 hardware virtual channels, extendable to 256 virtual channels in software...interfaces (e.g. the HT virtual channels, including the HTcc and PoHT extensions, or the **SPI**-4 virtual channels).

Turning now to Fig. 3, an example of traffic received on two... ...the interface 30A may be an HT interface and the interface 30B may be a **SPI** interface. The traffic on the interfaces 30A-30B are illustrated in time order from right... ...switch 18.

The Rx circuit 26B receives only packet traffic in this example (via the **SPI** interface 30B), and thus transmits packets through the switch 18 to the packet DMA circuit 16. If packets are received in different virtual channels on the SPI interface 30B, the order of the packets transmitted to the packet DMA circuit 16 may differ from the order on the SPI interface 30B (e.g. the packet P3)) is transmitted before the packet P2)) in this... ...embodiment of Fig. 4, the Rx circuit 26A includes a decoder 60 (which includes a SPI decoder 62 and an HT decoder 64 including a PoHT BAR1 register 66), a hash... ... receives the input data from the interface 30A and decodes the data according to the SPI specification (in the SPI decoder 62) or the HT specification (in the HT decoder 64). One of the decoders ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving **SPI**-4 phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit may indicate, when set, that a SPI-4 abort control word was received in the packet or an error was detected in... ...field stores the IVC for a received packet, if the packet was transmitted on the SPI interface. For output queue descriptors, the VC field may store a value for which the.....28C may append the bits to the OVC to generate the VC field in the SPI-4 packet. The memory buffer address field stores the address of the memory buffer indicated...

**Specification:** ...interfaces using the PoHT extension. Alternative, such interfaces 30A-30C may be system packet interfaces (**SPI**) according to any level of the **SPI** specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI**-4 phase 2 interfaces. In the illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the **SPI**-4 interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and **SPI**-4 interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e... ...g. transmitting the packet data as a payload of a command, such as PoHT). The **SPI**-4 interface may define 16 hardware virtual channels, extendable to 256 virtual channels in software...interfaces (e.g. the HT virtual channels, including the HTcc and PoHT extensions, or the **SPI**-4 virtual channels).

Turning now to Fig. 3, an example of traffic received on two... ...the interface 30A may be an HT interface and the interface 30B may be a **SPI** interface. The traffic on the interfaces 30A-30B are illustrated in time order from right... ...switch 18.

The Rx circuit 26B receives only packet traffic in this example (via the **SPI** interface 30B), and thus transmits packets through the switch 18 to the packet DMA circuit 16. If packets are received in different virtual channels on the **SPI** interface 30B, the order of the packets transmitted to the packet DMA circuit 16 may differ from the order on the **SPI** interface 30B (e.g. the packet P3)) is transmitted before the packet P2)) in this... ...embodiment of Fig. 4, the Rx circuit 26A includes a decoder 60 (which includes a **SPI** decoder 62 and an HT decoder 64 including a PoHT BAR1 register 66), a hash... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 62) or the HT specification (in the HT decoder 64). One of the decoders ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving **SPI**-4 phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit may indicate, when set, that a **SPI**-4 abort control word was received in the packet or an error was detected in...

...field stores the IVC for a received packet, if the packet was transmitted on the **SPI** interface. For output queue descriptors, the VC field may store a value for which the... ...28C may append the bits to the OVC to generate the VC field in the **SPI**-4 packet. The memory buffer address field stores the address of the memory buffer indicated...